

WHAT CLAIMED IS:

1. A method for changing a frequency of a central processing unit (CPU) under the control of a neural network, comprising:

providing a plurality of environmental parameters;

5 calculating an output vector by inputting the environmental parameters to the neural network; and

changing the frequency of the CPU according to the output vector.

2. The method of claim 1, wherein the neural network is a radial neural network.

3. The method of claim 1, wherein the environmental parameter comprises a clock multiplier factor that the CPU uses currently.

4. The method of claim 1, wherein the environmental parameter comprises a clock multiplier factor that the CPU uses previously.

5. The method of claim 1, wherein the environmental parameter comprises a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

15 6. The method of claim 1, wherein the environmental parameter comprises a data accessing condition for a DMA (Direct Memory Access) controller.

7. The method of claim 1, wherein the environmental parameter comprises a data accessing condition for an AGP (Accelerated Graphics Port) interface.

8. The method of claim 1, wherein the environmental parameter comprises a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

9. A method for changing a frequency of a central processing unit (CPU) under the control of a neural network, wherein the neural network comprises m basis functions and m basis weights for calculating an output vector according to n environmental parameters, the method comprising steps of:

providing the n environmental parameters;

calculating m basis vectors by substituting the n environmental parameters into the m basis functions;

10 calculating the output vector according to the m basis weights and the m basis vectors; and

changing the frequency of the CPU according to the output vector, wherein m and n are positive integrals.

10. The method of claim 9, wherein the neural network is a radial neural network.

15 11. The method of claim 9, wherein the basis functions comprise a radial basis function.

12. The method of claim 11, wherein the radial basis function is a Gaussian function.

13. The method of claim 11, wherein the radial basis function is a multiquadric function.

14. The method of claim 9, wherein the environmental parameter comprises a clock multiplier factor that the CPU uses currently.

5 15. The method of claim 9, wherein the environmental parameter comprises a clock multiplier factor that the CPU uses previously.

16. The method of claim 9, wherein the environmental parameter comprises a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

10 17. The method of claim 9, wherein the environmental parameter comprises a data accessing condition for a DMA (Direct Memory Access) controller.

18. The method of claim 9, wherein the environmental parameter comprises a data accessing condition for an AGP (Accelerated Graphics Port) interface.

19. The method of claim 9, wherein the environmental parameter comprises a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

15 20. A method for changing a frequency of a central processing unit (CPU) under the control of a neural network, wherein the neural network comprises m basis functions for calculating an output vector according to n environmental parameters, the method comprising steps of:

(i) executing a learning procedure, further comprising:

providing p pseudo environmental parameters

providing a pseudo output vector; and

calculating m basis weights by the neural network according to the p
pseudo environmental parameters and pseudo output vector; and

5 (ii) executing an application procedure, further comprising:

providing the n environmental parameters;

calculating m basis vectors by substituting the n environmental parameters
into the m basis functions;

10 calculating the output vector according to the m basis weights and the m
basis vectors; and

changing the frequency of the CPU according to the output vector, wherein
m, n and p are positive integrals.

21. The method of claim 20, wherein the neural network is a radial neural network.

15 22. The method of claim 20, wherein the basis functions comprise a radial basis
function.

23. The method of claim 22, wherein the radial basis function is a Gaussian
function.

24. The method of claim 22, wherein the radial basis function is a multiquadric function.

25. The method of claim 20, wherein the pseudo environmental parameter comprises a clock multiplier factor that the CPU uses currently.

5 26. The method of claim 20, wherein the pseudo environmental parameter comprises a clock multiplier factor that the CPU uses previously.

27. The method of claim 20, wherein the pseudo environmental parameter comprises a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

10 28. The method of claim 20, wherein the pseudo environmental parameter comprises a data accessing condition for a DMA (Direct Memory Access) controller.

29. The method of claim 20, wherein the pseudo environmental parameter comprises a data accessing condition for an AGP (Accelerated Graphics Port) interface.

15 30. The method of claim 20, wherein the pseudo environmental parameter comprises a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

31. The method of claim 20, wherein the environmental parameter comprises a clock multiplier factor that the CPU uses currently.

32. The method of claim 20, wherein the environmental parameter comprises a

clock multiplier factor that the CPU uses previously.

33. The method of claim 20, wherein the environmental parameter comprises a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

5 34. The method of claim 20, wherein the environmental parameter comprises a data accessing condition for a DMA (Direct Memory Access) controller.

35. The method of claim 20, wherein the environmental parameter comprises a data accessing condition for an AGP (Accelerated Graphics Port) interface.

36. The method of claim 20, wherein the environmental parameter comprises a data accessing condition for a PCI (Peripheral Component Interconnect) interface.